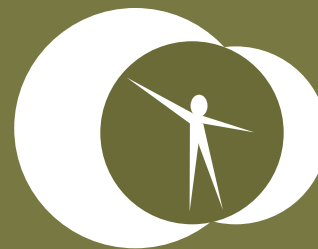


# Centre for Environmental Science and Engineering



**IIT Bombay, Powai, Mumbai 400 076 India**

**[www.cese.iitb.ac.in](http://www.cese.iitb.ac.in)**

The Centre for Environmental Science and Engineering at IIT Bombay was established in 1985. Prior to this, an “Environmental Science and Engineering Group” comprising of faculty members from various allied disciplines existed on campus since 1977. CESE currently has a dedicated group of eight faculty members with multi-disciplinary background and interests. The graduate program offered by this Centre prepares individuals for careers as engineers and scientists in Environmental Quality & Pollution Control. This program offers course work and research opportunities leading to the masters and doctoral degrees to enable our graduates to contribute to the solution of current and future environmental problems. Since inception, the Centre has established and maintained strong links with leading industries, institutions and national and international funding agencies. Research projects are currently funded by renowned agencies such as CIAR (Centre for Indoor Air Research, USA), DST (Department of Science and Technology), AERB (Atomic Energy Regulatory Board) and MOEF (Ministry of Environment and Forests) and MNES (Ministry of Non-conventional Energy Sources).

Major ongoing research projects at the Centre deals with contemporary topics like (a) biodegradation of complex industrial wastewaters (fertilizer, food, paper, coke oven, dairy, distillery, petrochemicals) and wastewaters containing halogenated aromatics, nitro-aromatics and other mixed substrates (b) integrated treatment and disposal of hazardous waste (c) clean technologies and industrial pollution prevention (d) biomedical waste management (e) biodegradation of complex non-aqueous liquid pollutants (NAPLs e.g., oil and tar) (f) development and application of toxicity/mutagenicity tests for emission and effluents (g) development of novel bioreactors (RBC, UASB) (h) air pollution monitoring, modelling and health risk analysis (i) aerosol and PAH emission factors, aerosol inventory, transport modelling and source apportionment (j) environmental impact assessment of developmental projects (k) in-situ and ex-situ remediation of contaminated groundwater and aquatic environments.

The Centre offers wide professional expertise and actively pursues sponsored research, consultancy and technical services. CESE is also very active in manpower development and regularly organizes tailor-made workshops and training programmes.

## RESEARCH ACTIVITIES

Research and Development is a key component of CESE activities and spans a wide range of areas from basic to applied in tune with national and global requirements.

### Sponsored Research Projects

- Comparative Study of Traditional and Improved Chulhas with respect to Indoor Air Pollution
- Modelling of Urban and Regional Scale Air Pollution in India
- Aerosols and Climate : PM - 2.5 and chemical Constituents from Combustion of Biomass Fuels in the Indian Subcontinent
- Significance of Pond systems in Treatment of Domestic Wastewater in India
- Guidelines for Siting and Design of Municipal Solid Waste Landfill
- Evaluation and Performance and Management Practices of Common Effluent Treatment Plants in Gujarat and Maharashtra
- Studies in the Physicochemical Degradation of Radioactive Waste at the Soil Water Interface and Development of a Suitable Clay Liner for Containment of the Waste.
- Application of MOS data to Monitoring Marine Pollution around Mumbai
- Characteristics of Particulate Matter in Biomass Based Producer Gas from Different Types of Gasifiers.
- Fungal Uptake of Dyes
- Isolation and Characterization of Microorganisms capable of degrading DDT Residues

### Consultancy Projects

- Development and Design of Wastewater Treatment Facility
- Adaptive Technology - Environmental Systems
- Air Quality Prediction Modelling from HPCL Mumbai Refinery
- Air Dispersion Modelling of Thermal Power Stations using ISC Software
- Air Monitoring at Panvel Junction
- Air Pollution Dispersion Modelling for Trombay Thermal Power Station
- Ambient Air and Marine Water Quality Monitoring from JNP, Nhava Sheva
- Biological Treatment of Steel Plant Effluents
- Capacity Building in Environmental Impact Assessment (EIA)
- Caustic Concentration Systems
- Development of Treatment Methodologies
- Dry Inventorization of Effluent Generation by MIDC, Bombay
- Environmental Impact Assessment of a Combined Hazardous Waste Disposal Facility
- Environmental Impact Assessment of Hazardous Waste TSDF
- Emissions from Repellant Coils
- Environmental Database Management Systems for Power Plants
- Environmental Management Plan for Jawaharlal Nehru Port Trust
- Environmental Status of Kalyan Municipal Corporation
- Environmental Status Survey
- Field Air Monitoring for Mumbai Urban Transport Project
- Indoor Air Quality Monitoring for Industrial Development Bank of India Tower
- Microbial Reduction of Sulphate
- Projects on Pollution Abatement
- Treatability of Wastewater from Mantari Industries
- Treatability Study of Wastewater from Indian Petroleum Corporation Ltd.

### For Further Information :

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